CLAIMS

1. An LC oscillator using an inductor element formed on a substrate, characterized in that the inductor element has two conductors formed in piles on the substrate with being mutually insulated, and wherein both odd ends are mutually connected, and further, an upper layer of the conductors is used as an inductor conductor.

2. The LC oscillator according to claim 1, characterized in that the substrate is a semiconductor substrate, and components are formed on the substrate in which the inductor element is formed.

3. The LC oscillator according to claim 1, characterized in that said two conductors have substantially the same shape.

4. The LC oscillator according to claim 1, characterized in that said two conductors have long shapes, and one end of one conductor in a longitudinal direction is connected with one end of the other in the longitudinal direction.

5. The LC oscillator according to claim 1, characterized in that said two conductors have circular shapes less than one turn, and one end of one conductor is connected with one end of the other.

6. The LC oscillator according to claim 1, characterized in that said two conductors have spiral shapes each number of turns of which is one or more, and one end of one conductor is connected with one end of the other.

7. The LC oscillator according to claim 1, characterized in that the two conductors are formed in substantially linear shapes, and one end of one conductor is connected with one end of the other.

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8. The LC oscillator according to claim 1, characterized in that the two conductors are formed in meander shapes, and one end of one conductor is connected with one end of the other.

9. The LC oscillator according to claim 6, characterized in that an inner end of said one conductor is connected with an outer end of the other conductor.

10. The LC oscillator according to claim 1, characterized by further comprising:

an inductance component of the conductor that is an upper layer; and

a capacitance component between the two conductors.